



SEQUENCE LISTING

<110> Williams, John G. K.
LI-COR, Inc.

<120> Composition and Method for Nucleic Acid Sequencing

<130> 020031-003110US

<140> US 10/821,689

<141> 2004-04-08

<150> US 60/461,522

<151> 2003-04-08

<150> US 60/462,988

<151> 2003-04-14

<160> 23

<170> PatentIn Ver. 2.1

<210> 1

<211> 89

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:target nucleic
acid, single molecule in microtiter plate well

<400> 1

tatgaaaatt ttccggttta aggcgtttcc gttctttcttc gtcataactt aatgttttta 60
tttaaaatac cctctgaaaa gaaaggaaa 89

<210> 2

<211> 89

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:target nucleic
acid, single molecule in microtiter plate well

<400> 2

cgacaggtgc tgaaagcgag gctttttggc ctctgtcggt tcctttctct gtttttgtcc 60
gtggaatgaa caatggaagt caacaaaaa 89

<210> 3

<211> 89

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:target nucleic
acid, single molecule in microtiter plate well

<400> 3
gcagctggct gacatttttcg gtgcgagtat ccgtaccatt cagaactggc aggaacaggg 60
aatgcccgtt ctgcgaggcg gtggcaagg 89

<210> 4
<211> 89
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:target nucleic acid, single molecule in microtiter plate well

<400> 4
gtaatgaggt gctttatgac tctgccgccg tcataaaatg gtatgccgaa agggatgctg 60
aaattgagaa cgaaaagctg cgccgggag 89

<210> 5
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:amino acid anchor

<220>
<221> MOD_RES
<222> (11)
<223> Xaa = p-acetyl-L-phenylalanine (pa-Phe)

<400> 5
Leu Leu Ser Lys Lys Arg Ser Leu Cys Cys Xaa Cys Thr Val Ile Val
1 5 10 15
Tyr Val Thr Asp Thr
20

<210> 6
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:first double-stranded oligonucleotide adaptor

<220>
<221> modified_base
<222> (1)
<223> n = biotinylated c

<400> 6
ngccacatta cacttcctaa cacgt 25

<210> 7
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:complement of
 first double-stranded oligonucleotide adaptor

 <400> 7
 cgtgtagga agtgtaatgt ggcg 24

 <210> 8
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:second
 double-stranded oligonucleotide adaptor

 <400> 8
 cagtaggtag tcaaggctag agtct 25

 <210> 9
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:complement of
 second double-stranded oligonucleotide adaptor

 <400> 9
 gactctagcc ttgactacct actg 24

 <210> 10
 <211> 30
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:ligated DNA
 product

 <220>
 <221> modified_base
 <222> (1)
 <223> n = biotinylated c

 <220>
 <221> modified_base
 <222> (26)..(30)
 <223> n = g, a, c or t

 <400> 10
 ngccacatta cacttcctaa cacgtnnnnn 30

<210> 11
 <211> 33
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:ligated DNA
 product

 <220>
 <221> modified_base
 <222> (1)..(5)
 <223> n = g, a, c or t

 <400> 11
 nnnnnagact ctagccttga ctacctactg aaa 33

 <210> 12
 <211> 30
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:ligated DNA
 product, unbiotinylated DNA strand eluted at
 alkaline pH

 <220>
 <221> modified_base
 <222> (1)..(5)
 <223> n = g, a, c or t

 <400> 12
 nnnnnacgtg ttaggaagtg taatgtggcg 30

 <210> 13
 <211> 30
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:ligated DNA
 product, unbiotinylated DNA strand eluted at
 alkaline pH

 <220>
 <221> modified_base
 <222> (1)
 <223> n = 5' phosphorylated c

 <220>
 <221> modified_base
 <222> (26)..(30)
 <223> n = g, a, c or t

 <400> 13
 nagtaggtag tcaaggctag agtctnnnnn 30

<210> 14
 <211> 59
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:primed circular
 template strand, eluted strands circularized
 ,

 <220>
 <221> modified_base
 <222> (1)..(59)
 <223> n = g, a, c or t

 <400> 14
 nnnnnnctgtgt taggaagtgt aatgtggcgc agtaggtagt caaggctaga gtctnnnnn 59

 <210> 15
 <211> 49
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:primer oligo
 complementary to both adaptors

 <400> 15
 agactctagc cttgactacc tactgcgcca cattacactt cctaacacg 49

 <210> 16
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:T7 DNA
 polymerase gene forward amplification primer
 encoding exonuclease mutations

 <400> 16
 atgatacgttt ctgccatcgc agctaac 27

 <210> 17
 <211> 16
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:T7 DNA
 polymerase gene reverse amplification primer

 <400> 17
 tcagtggcaa atcgcc 16

<210> 18
 <211> 75
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:synthetic
 oligonucleotide encoding Strep-Tag II sequence
 overlapping 5'-end N-terminus of amplified T7
 polymerase gene with 2 exo- mutations

<220>
 <221> CDS
 <222> (1)..(75)
 <223> Strep-Tag II peptide, spacer and T7 polymerase
 N-terminus overlap with 2 exo- mutations

<400> 18
 atg tcc aac tgg tcc cac ccg cag ttc gaa aaa ggt gga ggt tcc gct 48
 Met Ser Asn Trp Ser His Pro Gln Phe Glu Lys Gly Gly Gly Ser Ala
 1 5 10 15

 atg atc gtt tct gcc atc gca gct aac 75
 Met Ile Val Ser Ala Ile Ala Ala Asn
 20 25

<210> 19
 <211> 25
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Strep-Tag II peptide, spacer and T7 polymerase
 N-terminus overlap with 2 exo- mutations

<400> 19
 Met Ser Asn Trp Ser His Pro Gln Phe Glu Lys Gly Gly Gly Ser Ala
 1 5 10 15

 Met Ile Val Ser Ala Ile Ala Ala Asn
 20 25

<210> 20
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:overlapping PCR
 synthetic oligonucleotide StrepTag forward primer

<400> 20
 atgtccaact ggtcccaccc 20

<210> 21
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:synthetic
 oligonucleotide sample primer derived from cystic
 fibrosis transmembrane conductance regulator gene

<400> 21
 tactataaaa gaaattacca c 21

<210> 22
 <211> 22
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:synthetic
 oligonucleotide sample template derived from
 cystic fibrosis transmembrane conductance
 regulator gene normal allele

<400> 22
 gugguaauuu cuuuuauagu ag 22

<210> 23
 <211> 22
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:synthetic
 oligonucleotide sample template derived from
 cystic fibrosis transmembrane conductance
 regulator gene (delta)F508 deletion mutant

<400> 23
 gugguaauuu cuuuuauagu aa 22